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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,790	04/18/2005	Yan Xu	5731-000015/US/NP	2316
28997 7590 02/08/2007 HARNES, DICKEY, & PIERCE, P.L.C 7700 BONHOMME, STE 400 ST. LOUIS, MO 63105			EXAMINER FELTON, MICHAEL J	
			ART UNIT	PAPER NUMBER
			1731	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/08/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/531,790	Applicant(s) XU, YAN	
	Examiner Michael J. Felton	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The use of the trademarks or tradenames, "AgroFibre" and "AgroBinder" has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

2. Claims 1, 2, and 4-12 contain the trademark/trade name "AgroFibre" and "AgroBinder". Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does

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not identify or describe the goods associated with the trademark or trade name.

In the present case, the trademark/trade name is used to identify/describe

“agricultural fibers” and “an adhesive” respectively and, accordingly, the identification/description is indefinite.

3. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph.

Although the applicant can act as his or her own lexicographer to specifically define a term of a claim, the use of a trademark or trade name, if used as a limitation to identify or describe a material or product, results in the claim not complying with the requirements of 35 U.S.C. 112, second paragraph. *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). In the instant application, the use of the trade names Agrofibre and AgroBinder causes confusion as to the scope of the claims.

4. Claims 1, 2, and 4-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 1, 5, 6, and 7, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter.

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1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation "carrier, no-carrier, carrier-no-carrier", and the claim also recites "starch carrier" which is the narrower statement of the range/limitation. Claim 5 recites "preferably oxidized starch" after reciting a retaining aid; claim 6 recites "preferably in the form of aqueous solution" after reciting the addition of caustic; and claim 7 recites, "preferably boron containing compound" after reciting the addition of a green bonding agent.

5. Claims 1, 2, and 4-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 1 and 5; Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed.

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Cir. 1999). The term "self-retaining" in claims 1 and 5 is used by the claim for an unknown meaning, while the accepted meaning is "something retained without the use of retaining aids." (see Maslanka et al. (4,235,982), col. 1, line 65-col.2, line 2). The term is indefinite because the specification does not clearly redefine the term. In addition, the claims contradict the accepted usage by stating that a retaining aid is required to make something self-retaining.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any

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inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1 - 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fitt et al. (5,358,559) in view of Sheperd (1,891,732).

Fitt et al. disclose a natural adhesive formulation (binder) made by cooking a starch carrier phase, by adding caustic (col. 1, 24-33) to obtain a pH between 10 and 14 for producing gelatinized starch, adding an ungelatinized starch, a green bonding agent (borax, col. 1, 34-50) and mixing for 3 to 25 minutes (col. 3, 64-68; col. 4, 1-13). Fitt et al. also indicate that water resistant agents can be added (col. 1, 60-68).

Although Fitt et al. use hemicellulose from corn or other fibers to strengthen their adhesive, they do not disclose using the fibers themselves or how the fibers are processed. However, Sheperd describes a chemical free slurry (page 2, 40-45) of mechanically processed agricultural fibers, including pressing, digestion under hydrothermal conditions (135 – 148.9 °C, at 0.17 – 0.38 Mpa, for 3-5 hours more or less (page 2, line 28-39), cutting and refining the fibers (page 1, 82-98), as well as a natural adhesive (gums naturally part of the vegetative matter, page 1, 33-43).

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It would have been obvious to one of ordinary skill in the art at the time of invention to use a binder, such as the starch based binder of Fitt et al., to bind together fibers to make a fiber structure, similar to Sheperd. The motivation to so would be to reduce dependence on expensive synthetic polymeric binders as indicated in Fitt et al. (col. 2, 51-57).

10. Claim 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fitt et al. (5,358,559), Sheperd (1,891,732), and Berliner (2,898,260), in further view of Arnold et al. (5,849,152). Fitt et al., Sheperd, and Berliner do not disclose forming molded shaped bodies using heat a vacuum from slurries of fibers and binder. However, Arnold et al. disclose using heat and molds (col. 7, 20-65) and vacuum (col. 6, 55-56) to produce packaging and other products from fiber and binder mixtures. It would have been obvious to one of ordinary skill in the art at the time of invention that the inventions of Fitt et al., Sheperd, Berliner could be used in the molding operation disclosed by Arnold et al. The motivation would have been to produce shaped products, as Sheperd only produced boards, but it is widely know that composite materials can be molded into a variety of shapes.

11. Claim 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fitt et al. (5,358,559), Sheperd (1,891,732), and Berliner (2,898,260), in further view of Palese et al. (2,681,599). Fitt et al., Sheperd, and Berliner do not disclose using a low consistency slurry to manufacture molded

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products. However, Palese et al. disclose using low consistency pulp to form molded shape bodies (col. 3, 28-41). Although Palese et al. disclose using pulp, other types of natural fibers are disclosed including cotton, caroa, manila, jute, and bagasse. Therefore it would have been obvious to one of ordinary skill in the art that pulp composed of the fibers disclosed in the instant invention could be used in the molding process disclosed by Palese, et al. The motivation to do so would be to produce a final fiber based composite in the final desired shape.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Felton whose telephone number is 571-272-4805. The examiner can normally be reached on Monday to Friday, 7:30 AM to 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John P. Miller
SPE, Art Unit 1731

MJF